

WHAT IS CLAIMED IS:

1. An exposure apparatus having an exposure mode that transfers a pattern on a reticle onto an object,
5 and a standby mode that waits for exposure, said exposure apparatus comprising:

an optical system for introducing the exposure light to the object in the exposure mode; and
a mechanism for allowing the exposure light
10 to enter the reticle and/or the optical system in the standby mode, and for preventing the exposure light from entering the object in the standby mode.

2. An exposure apparatus according to claim 1,
15 further comprising a light source that emits the exposure light in the standby mode.

3. An exposure apparatus according to claim 1, wherein the exposure light is extreme ultraviolet light
20 having a wavelength of 20 nm or less.

4. An exposure apparatus according to claim 1, wherein said mechanism includes:
an absorption member that absorbs the
25 exposure light;
a drive mechanism for driving said absorption member between a first position on an optical path of

the exposure light, and a second position apart from the optical path of the exposure light; and

a controller for controlling driving by said drive mechanism so that the absorption member absorbs
5 the exposure light in the standby mode.

5. An exposure apparatus according to claim 4, further comprising a projection optical system for projecting the pattern onto the object, and wherein the
10 first position is located between said projection optical system and the object.

6. An exposure apparatus according to claim 1, further comprising a stage for movably supporting the
15 object, wherein said mechanism includes a drive mechanism for driving the stage to move the object to a position apart from an optical path of the exposure light.

20 7. An exposure apparatus according to claim 6, wherein said mechanism further includes:

an absorption member that absorbs the exposure light, said absorption member being driven by said drive mechanism between a first position on an
25 optical path of the exposure light, and a second position apart from the optical path of the exposure light; and

a controller for controlling driving by said drive mechanism so that the absorption member absorbs the exposure light in the standby mode.

5 8. A chuck that fixes an object to be exposed, onto which a pattern on a reticle is exposed, said chuck comprising a contact part that contacts and fixes the objects, a contact ratio of the contact part being 20 % or smaller on a surface of object which contacts
10 the contact part.

 9. An exposure apparatus for exposing a pattern on a reticle onto an object, said exposure apparatus comprising a chuck for fixing the object, the chuck
15 including a contact part that contacts and fixes the object, wherein a contact ratio of the contact part is 20 % or smaller on a surface of object which contacts the contact part.

20 10. A standby method for waiting for exposure that transfers a pattern on a reticle onto an object absorbed by a wafer chuck through exposure light and an optical system, said method comprising the steps of:
 irradiating the exposure light to the reticle
25 and/or the optical system; and
 shielding the object from the exposure light during said irradiating step.

11. A method according to claim 10, wherein an optical path of the light is maintained in an atmosphere under vacuum or reduced pressure.

5 12. An exposure method that illuminates a pattern formed on a reticle and transfers the pattern onto an object absorbed by a wafer chuck through an optical system that includes an optical element, said step comprising the steps of:

10 determining whether temperatures of the reticle and/or the optical system are in steady states; and

irradiating the exposure light onto the reticle and/or the optical system while preventing the exposure light from entering the object, when said
15 determining step determines that the temperature distributions are not in the steady states.

13. A device fabrication method comprising the
20 steps of:

exposing an object with by using an exposure apparatus; and

developing the object that has been exposed,
wherein the exposure apparatus has an
25 exposure mode that transfers a pattern on a reticle onto the object, and a standby mode that waits for exposure, said exposure apparatus including:

an optical system for introducing the exposure light to the object in the exposure mode; and

a mechanism for allowing the exposure light to enter the reticle and/or the optical system in the standby mode, and for preventing the exposure light
5 from entering the object in the standby mode.

14. A device fabrication method comprising the steps of:

10 exposing an object by using an exposure apparatus; and

developing the object that has been exposed, wherein the exposure apparatus that exposes a pattern on a reticle onto an object, and includes a
15 chuck that includes a contact part that contacts and fixes the object, a contact ratio of the contact part being 20 % or smaller on a surface of object which contacts the contact part.